

6.0 CUMULATIVE EFFECTS

This section presents the potential impacts on resource areas resulting from other facilities, operations, and activities that, in combination with potential impacts from the proposed power plant, may contribute to cumulative impacts. Because the proposed site is relatively isolated, the potential for cumulative impacts to most resources would be low. Except for atmospheric resources, which can be affected by sources of air emissions throughout the region, the adjacent Turris Mine is the only existing facility or source of environmental impact that has been identified as potentially contributing to cumulative impacts. The mine has not contributed to any known adverse cumulative effects since operations began in 1982. Because the cumulative effects of the proposed power plant and the coal mine would be intertwined, their impacts were described in Section 4.0, which also contained descriptions of the cumulative impacts of regional and global sources of air emissions on atmospheric resources.

As indicated in Table 3.9.1, the population in Elkhart, IL, declined by 6.7% from 1990 to 2000; the population in Logan County declined by 2% from 1980 to 2000, although the 2000 population showed an increase of 1.3% since 1990. The lack of a substantial growth trend for population is reasonable based on the agricultural nature of the area. Farm acreage in Logan County increased by 3% from 1992 to 1997, and 82.1% of the County is devoted to crop production (Farmland 1997). Based on this population trend and the fact that land surrounding Turris Coal Company property is used for agriculture, groundwater use for municipal or individual needs would not be expected to substantially change in the foreseeable future. Thus, cumulative impacts for groundwater availability and quality would be expected to be limited to the impacts from addition of the proposed power plant to local usage, as documented in this EIS.

Two projects associated with the Turris Mine might be constructed independently of the proposed power plant (i.e., two projects might be constructed regardless of the outcome of the proposed project). For the first project, Turris Coal Company has received a permit for coal combustion waste disposal on 92 acres of land, which would consist of 72 acres for solid waste disposal immediately to the north and east of the proposed project and 20 acres immediately to the west of the proposed project for a sedimentation pond and soil stockpiles. The Turris Mine would receive coal ash from industrial coal users for disposal at this site. Potential users could include A. E. Staley and ADM; both companies have corn processing facilities in Decatur that produce ash from burning coal to generate steam and energy. The new site would supplement the existing 265 acres of mine property used for disposal of combustion waste. This 35% increase in land use for waste disposal would not create unique or new environmental issues. Waste management and handling would be consistent with methods that have historically been used for managing combustion waste at the site, and Turris Coal Company would continue to monitor for groundwater contamination and leaching from the waste disposal areas. To date, no environmental contamination or degradation of groundwater quality has resulted from the existing waste disposal activities; extension of the management methods used for the existing waste

disposal areas to the new site would be expected to result in similar environmental results and in avoidance of adverse cumulative effects.

Because 270 acres are currently available on Turriss Coal Company's property, the cumulative use of 119 acres (92 acres for a new waste disposal sites, 5 acres for the proposed power plant, and 22 acres for the proposed retention pond) would not alter the currently approved land use activities. Disturbances to ecological habitat would be similar to those described in Section 4.6. If constructed, coal ash for the new waste disposal site would be delivered by trucks. No additional truck traffic would be required because the ash would be delivered in trucks that currently transport coal from the Turriss Mine to industrial facilities and return empty to the mine. Therefore, no cumulative impacts would be expected from traffic congestion or noise.

The second project would comprise construction of a railroad spur to the Turriss Mine from the Union Pacific rail line, which passes within 2 miles of the mine (Figure 2.1.2). The railroad spur would be used to transport about 2 train shipments of coal per week from the mine and would be located immediately west of the site proposed for the power plant. The railroad spur would not disturb a large amount of land, disrupt ecological habitat, or cause traffic congestion. The infrequent noise associated with train movement should not cause appreciable impacts.

No other existing or proposed facilities, operations, or activities have been identified that may contribute to cumulative impacts. Although Turriss Coal Company actively pursues new customers for coal from the Turriss Mine, which could increase the rate of coal mining, no appreciable changes in the mining rate have been confirmed for the foreseeable future. (S. Fowler, Former Manager of Engineering, Turriss Coal Company, personal communication to R. Miller, ORNL, March 31, 1998; and G. Gaar, Economic Development Director, Logan County, personal communication to R. Miller, ORNL, March 31, 1998). Thus, increased coal production from the Turriss Mine, beyond the need for increased production to support the proposed power plant, would not be a foreseeable contributor to cumulative effects.